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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,915	03/24/2004	Les Bogdanowicz	114429-007	8057

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EXAMINER

MALAMUD, DEBORAH LESLIE

ART UNIT	PAPER NUMBER
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3766

DATE MAILED: 09/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/808,915	Applicant(s) BOGDANOWICZ, LES	
	Examiner Deborah Malamud	Art Unit 3766	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2006 and 11 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The examiner acknowledges the amendments received 07 April 2006 and 11 May 2006. Claims 1-22 are pending.

Drawings

2. In view of the amendments to the claims, the examiner withdraws the objection to the claims.

Specification

3. The examiner acknowledges the correction to the title of the specification. However, the title is still not clearly indicative of the invention to which the claims are directed. The examiner suggests changing the title to "Compositions for electric stimulation of the eye." The objection to the specification is maintained.

Claim Objections

4. In view of the amendments to the claims, the examiner withdraws the objection to claims 7 and 21.
5. Claim 10 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. As amended, claim 1 requires a photoconductive element as the substrate, as does claim 10.

Claim Rejections - 35 USC § 112

6. In view of the amendments to the claims, the examiner withdraws the rejection of claims 5 and 6 under 35 USC 112, second paragraph.

7. Applicant's arguments, see "Remarks," page 7, filed 07 April 2006, with respect to claim 8 have been fully considered and are persuasive. The rejection of claim 8 under 35 USC 112, first paragraph has been withdrawn.

Claim Rejections - 35 USC § 102

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. In view of the amendments to the claims, the examiner withdraws the rejection of claims 1-2, 5-8, 10 and 21 under 35 U.S.C. 102(b) as being anticipated by Abreu (U.S. 6,123,668). Rejection of these claims under new grounds is presented below.

Claim Rejections - 35 USC § 103

10. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

11. Claims 1-2, 5-8, 10 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morimoto et al (U.S. 2003/0139784) in view of Abreu (U.S. 6,123,668). Regarding claims 1, 7-8 and 10, Morimoto discloses, (par. 0009; Figure 3) "an electrode having a shape like a contact lens, which is placed on a cornea; and an electrical stimulation pulse generator which is connected to the electrode, for generating a predetermined electrical stimulation from the electrode." The examiner considers this to be a noninvasive contact lens for electrically stimulating an eye of a wearer of the

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lens. Morimoto discloses the claimed invention except for a photoconductive member. Abreu however discloses a neuro stimulation transmission device that is (col. 94, lines 65-67; Figure 59C) "externally placed on the eye using an oversized contact device (984) as a corneal scleral lens. The device includes an electrode (986) producing a microcurrent, a microphotodiode or electrode (988), a power source and a transmitter for transmission of a signal to a remote location for analysis and storage." The neurostimulation transmission device (NSTD; col. 20, lines 28-40) "relates to a system in which radio activated micro-photodiodes or/and micro-electric circuits and electrodes are surgically implanted or externally placed on the eye or other parts of the body such as the brain and used to electrically stimulate non-functioning neural or degenerated neural tissue in order to treat patients with retinal degeneration, glaucoma, stroke, and the like." Although Abreu discloses a system that takes measurements from the eye rather than administering electrical treatment, Abreu's system is still activated using a photoconductive member. Abreu and Morimoto both disclose lenses for placement on the eye for treatment of an ocular condition. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Morimoto's ocular stimulation device with Abreu's photoconductive member in order to provide stimulation to the eye powered by light energy.

12. Regarding claim 2, Abreu discloses, (col. 19, lines 38-40) "a surface electrode mounted in the contact device may be activated by optical or electromagnetic means in order to increase the temperature of the eye." Though Abreu discloses the electromagnetic radiation activating a heating device, the examiner considers Morimoto

in view of Abreu to disclose a substrate that generates an electrical current to the eye in response to electromagnetic radiation.

13. Regarding claims 5 and 6, the examiner considers the microphotodiode (988) in Figure 59C of Abreu to be arranged in a shunt manner or in a combination of a parallel manner and a shunt manner.

14. Regarding claim 21, the examiner considers the electrode (986) in Figure 59C to be generally centrally disposed on the lens.

Regarding claim 22, Morimoto and Abreu disclose the claimed invention but do not disclose expressly the shape of the electrodes as arcuate. It would have been an obvious matter of design choice to a person of ordinary skill in the art to modify the electrode as taught by Morimoto and Abreu, with the shape claimed, because the applicant has not disclosed the shape provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected the applicant's invention to perform equally well with the electrodes as taught by Abreu, because both Abreu and the claimed invention are used to stimulate the surface of the eye of a patient. Therefore, it would have been an obvious matter of design choice to modify Morimoto and Abreu's electrode to obtain the invention as specified in the claim. Furthermore, Morimoto and Abreu disclose the claimed invention except for two electrodes. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide two electrodes, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. See MPEP § 2144.04.

15. Claims 3-4 and 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morimoto et al (U.S. 2003/0139784) in view of Abreu (U.S. 6,123,668) and in further view of Chow et al (U.S. 2002/0087202). Morimoto in view of Abreu differs from the claimed invention in failing to teach exposure of the substrate to infrared light of a wavelength from about 880 nm to about 940 nm. Chow '202 however discloses, (par. 0012) "multiple layer dielectric filters are disposed on the P surfaces and N surfaces of the MMRI subunits to allow visible light (400 to 740 nm) to pass through to the P surfaces and infrared light (740-900 nm) to pass through to the N surfaces. In this manner, the PiN configuration of each MMRI subunit responds to visible light while the NiP configuration responds to infrared light." Though Morimoto in view of Abreu teaches a contact lens device for stimulating an eye and Chow '202 teaches a retinal stimulation device, both references teach electrical stimulation of the eye in response to an external stimulus. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Morimoto and Abreu's contact lens device with Chow's '202 activation wavelength in order to create a very specific stimulus for the electrical current response of the substrate.

16. Regarding claim 14, Chow '202 discloses, (par. 0079) "FIG. 24, A through D shows a glasses-like configuration (94) of the PTOS [projection and tracking optical system] component of the AIRES [adaptive imaging retinal stimulation] system." The examiner considers this to be stimulating eye glasses.

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17. Regarding claim 15, Chow '202 discloses (par. 0017) "the AIRES PTOS headset is worn by the patient, and projects variable intensity IR and visible-light images and illumination into the eye, by using an IR and visible-light capable CRT (IRVCRT)." The examiner considers this to be stimulating eye glasses that have lenses that filter infrared light.

18. Regarding claims 16 and 17, Chow '202 discloses (par. 0079; Figure 24C) an "internal infrared and visible light capable LED light source (92)." The examiner considers this to be a light emitting diode that is associated with the stimulating eye glasses.

19. Regarding claims 18 and 19, Morimoto and Abreu in view of Chow '202 discloses the claimed invention except for more than one light emitting diode emitting electromagnetic radiation at more than one wavelength. It would have been obvious to one of ordinary skill in the art at the time of the invention to use more than one light emitting diode with more than one wavelength of light, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. See MPEP § 2144.04.

20. Claims 9, 11-13 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morimoto et al (U.S. 2003/0139784) in view of Abreu (U.S. 6,123,668) and in further view of Chow et al (U.S. 2003/0014089). Morimoto in view of Abreu discloses the claimed invention except for a solar cell as a substrate. Chow '089 however discloses, (par. 0013) "the device may also comprise an inductive receiver

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and/or a solar cell, and/or a battery.” Morimoto, Abreu and Chow ‘089 all disclose systems for treating ocular conditions. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Morimoto and Abreu’s contact lens stimulation system with Chow’s ‘089 solar cell in order to provide a source of energy that is readily available and does not need replacement often.

21. Regarding claims 11-13 and 20, Chow ‘089 discloses (par. 0013) “the stimulating electrode of an RSD may be, for example, an anode or a cathode; the ground return electrode comprising an opposite polarity of the stimulating electrode.”

Conclusion

22. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Malamud whose telephone number is (571) 272-2106. The examiner can normally be reached on Monday-Friday, 9.00am-5.30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pezzuto can be reached on (571)272-6996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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